

**Amendments to the Claims:**

The listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

Claims 1-17 (Canceled).

18. (New): A polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline, wherein said polymorphic form provides:

- (i) an infrared spectrum containing peaks at 724, 758, 777, 804, 818, 838, 856, 905, 918, 948, 1023, 1055, 1081, 1092, 1118, 1136, 1153, 1178, 1244, 1302, 1318, 1365, 1378, 1403, 1444, 1471, 1490, 1569, 1584, 1603 and  $2819\text{ cm}^{-1}$ ; or
- (ii) a Raman spectrum containing peaks at 159, 184, 214, 241, 285, 304, 318, 429, 545, 558, 614, 706, 724, 803, 856, 1000, 1023, 1080, 1093, 1136, 1152, 1233, 1243, 1317, 1343, 1364, 1378, 1403, 1446, 1569, 1584, 1602, 3050 and  $3073\text{ cm}^{-1}$ ; or
- (iii) an X-ray powder diffraction pattern which gives calculated lattice spacings at 10.29, 11.94, 17.47, 19.55, 19.84, and  $20.33^\circ$ ; or
- (iv) a melting point of  $188^\circ\text{C}$ .

19. (New): A polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline, wherein said polymorphic form provides an infrared spectrum substantially in accordance with Figure 1.

20. (New): A polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline, wherein said polymorphic form provides a Raman spectrum substantially in accordance with Figure 2.

21. (New): A polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline, wherein said polymorphic form provides an X-ray powder diffraction pattern which gives calculated lattice spacings at 10.29, 10.76, 11.94, 14.33, 14.61, 14.93, 16.02, 16.80, 17.47, 17.92, 19.13, 19.55, 19.84, 20.33, 21.16, 21.36, 23.33, 23.96, 24.44, 24.67, 25.51, 26.12,

27.13, 27.77, 28.06, 28.35, 29.23, 29.46, 30.06, 30.35, 31.27, 32.35, 32.66, 33.08, 33.77, 34.49, 35.18, 36.42, 37.34, 38.39 and 39.51°.

22. (New): A polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline, wherein said polymorphic form provides an X-ray powder diffraction pattern substantially in accordance with Figure 3.

23. (New): A method of treating a cognitive memory disorder which comprises administering a therapeutically effective amount of the polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline according to claim 18 to a patient in need thereof, wherein the cognitive memory disorder is selected from age related cognitive decline, mild cognitive impairment, and cognitive deficits in schizophrenia.

24. (New): A method of treating a cognitive memory disorder which comprises administering a therapeutically effective amount of the polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline according to claim 19 to a patient in need thereof, wherein the cognitive memory disorder is selected from age related cognitive decline, mild cognitive impairment, and cognitive deficits in schizophrenia.

25. (New): A method of treating a cognitive memory disorder which comprises administering a therapeutically effective amount of the polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline according to claim 20 to a patient in need thereof, wherein the cognitive memory disorder is selected from age related cognitive decline, mild cognitive impairment, and cognitive deficits in schizophrenia.

26. (New): A method of treating a cognitive memory disorder which comprises administering a therapeutically effective amount of the polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline according to claim 21 to a patient in need thereof, wherein the cognitive memory disorder is selected from age related cognitive decline, mild cognitive impairment, and cognitive deficits in schizophrenia.

27. (New): A method of treating a cognitive memory disorder which comprises administering a therapeutically effective amount of the polymorphic form of 3-

phenylsulfonyl-8-piperazin-1-yl-quinoline according to claim 22 to a patient in need thereof, wherein the cognitive memory disorder is selected from age related cognitive decline, mild cognitive impairment, and cognitive deficits in schizophrenia.

28. (New): A method of treating Alzheimer's disease which comprises administering a therapeutically effective amount of the polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline according to claim 18 to a patient in need thereof.

29. (New): A method of treating Alzheimer's disease which comprises administering a therapeutically effective amount of the polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline according to claim 19 to a patient in need thereof.

30. (New): A method of treating Alzheimer's disease which comprises administering a therapeutically effective amount of the polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline according to claim 20 to a patient in need thereof.

31. (New): A method of treating Alzheimer's disease which comprises administering a therapeutically effective amount of the polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline according to claim 21 to a patient in need thereof.

32. (New): A method of treating Alzheimer's disease which comprises administering a therapeutically effective amount of the polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline according to claim 22 to a patient in need thereof.

33. (New): A pharmaceutical composition which comprises the polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline according to claim 18 and a pharmaceutically acceptable carrier or excipient.

34. (New): A pharmaceutical composition which comprises the polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline according to claim 19 and a pharmaceutically acceptable carrier or excipient.

35. (New): A pharmaceutical composition which comprises the polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline according to claim 20 and a pharmaceutically acceptable carrier or excipient.

36. (New): A pharmaceutical composition which comprises the polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline according to claim 21 and a pharmaceutically acceptable carrier or excipient.

37. (New): A pharmaceutical composition which comprises the polymorphic form of 3-phenylsulfonyl-8-piperazin-1-yl-quinoline according to claim 22 and a pharmaceutically acceptable carrier or excipient.